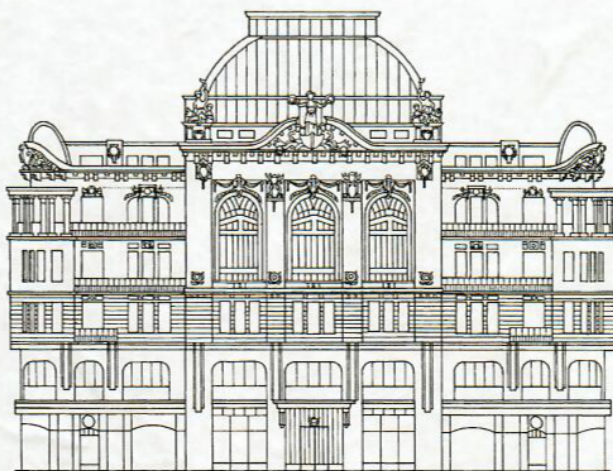


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ПРИМЕНА МУЛТИОМИКС ТЕХНОЛОГИЈА У
БИОХЕМИЈИ И БИОМЕДИЦИНИ

APPLICATION OF MULTI-OMICS TECHNOLOGIES IN
BIOCHEMISTRY AND BIOMEDICINE



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Expression, Purification and Characterization of Recombinant avian bornavirus Nucleoprotein variants

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Avian bornaviruses (ABVs) are negative-sense single-stranded RNA viruses belonging to the family Bornaviridae and are the causative agents of proventricular dilatation disease (PDD), a chronic and often fatal disease affecting numerous bird species (1–4). Among the viral structural proteins, the nucleoprotein (N protein) plays a crucial role in the viral life cycle by binding and protecting viral RNA and participating in the formation of ribonucleoprotein complexes (2,5–8). Due to its high level of conservation and strong immunogenic properties, the N protein is considered a promising target for the development of serological diagnostic assays (5,6,9,10).

To evaluate its potential as a diagnostic antigen, recombinant full-length (N-long) and truncated (N-short) variants of the ABV N protein were designed, expressed, purified, and characterized. Protein identity and antigenic properties were evaluated using ELISA, Western blot analysis, and mass spectrometry. Protein stability was evaluated by thermal denaturation analysis, including determination of the melting temperature (T_m). The obtained results demonstrated successful production of recombinant antigens and provided insight into their structural and antigenic properties. These findings support the further use of both N protein variants in the development and optimization of serological assays for the detection and monitoring of avian bornavirus infections.

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